



THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Oliver P. Peoples, Lara L. Madison, and Gjalt W. Huisman

COPY OF PAPERS
ORIGINALLY FILED

Serial No.: 09/364,847

Art Unit: 1652

Filed: July 30, 1999

Examiner: D. Steadman

For: "ENZYMES FOR BIOPOLYMER PRODUCTION"

RECEIVED #22
JUL 17 2002
TECH CENTER 1600/2900
M. J. J
7/2/02

Assistant Commissioner for Patents
Washington, D.C. 20231

DECLARATION UNDER 37 C.F.R. § 1.131

Sir:

We, Oliver P. Peoples, Lara L. Madison, and Gjalt W. Huisman, hereby declare that:

1. We are the co-inventors of the above-identified patent application.
2. Claims 1-3, 5, and 6 were rejected under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent No. 6,143,952 to Srienc *et al.* ("Srienc"). Claim 4 was rejected under 35 U.S.C. 103 (a) as being unpatentable over U.S. Patent No. 6,143,952 to Srienc *et al.* ("Srienc"), in view of *Trends Biotech* 9:226-231, 1991 by Bulow *et al.* ("Bulow") and *J. Mol. Biol.* 211:943-958, 1990, by Argos ("Argos").

3. The claims are drawn to a protein fusion having a formula selected from the group consisting of E1-L_n-E2 and E2-L_n-E1, wherein E1 and E2 catalyze successive reactions in a polyhydroxyalkanoate biosynthetic pathway and are each selected from the group consisting of β-ketothiolases, acyl-CoA reductases, polyhydroxyalkanoate synthases, poly(3-hydroxybutyrate) synthases, phasins, enoyl-CoA hydratases, and beta-hydroxyacyl-ACP::coenzyme-A transferase, in which linker L_n is a peptide of n amino acids that link E1 to E2 or E2 to E1, and wherein

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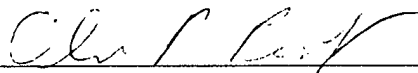
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expression of the fusion protein is under the control of a single promoter resulting in expression of both catalytically active E1 and E2.

4. We had conceived and reduced to practice the claimed protein fusions prior to the filing of the application that issued as U.S. Patent No. 6,143,952, U.S.S.N. 09/052,689 filed March 31, 1998, by Friedrich Srienc, John K. Jackson and David A. Somers, as demonstrated by the attached copies of the laboratory notebook pages of Lara L. Madison. These pages (from notebook #6) demonstrate the use of specific DNA primers used to sequence the claimed protein fusions (page 16); protein fusion production of polymer in *E. coli* (page 88); the high level production of polymer from the protein fusions (page 94); and western blot analysis showing the correctly expressed fusion protein (page 96).

5. I declare that all statements made herein of my own knowledge and belief are true and that all statements made on information and belief are believed to be true, and further, that the statements are made with the knowledge that willful false statements are punishable by fine or imprisonment, or both, under section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application or any patent issuing thereon.

Date: MAY 22, 2002


Oliver Peoples

Date: _____

Lara L. Madison

Date: _____

Gjalt W. Huisman



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Date: _____

Oliver Peoples

Date: 5/28/02

Lara L. Madison
Lara L. Madison

Date: _____

Gjalt W. Huisman

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Date: _____

Oliver Peoples

Date: _____

Lara L. MadisonDate: 5/28/02_____
Gjalt W. Harrison